

Hazardous Materials Transportation Training Modules

VERSION 5.0

INSTRUCTOR

Shipping Papers



U.S. Department of Transportation

Pipeline and Hazardous Materials
Safety Administration

Diamond Vogel Paint

Delivery Address:
McCoy & Hatfield Paints
123 Fighting Lane
Mason-Dixon, VA 23231

Billing Address:

HM	No. of Units	Shipping Description	Total Quantity
X	1 box	Aluminum powder, coated,	5 kg
		4.1, UN1309, PGIII	

This is to certify that the above-named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

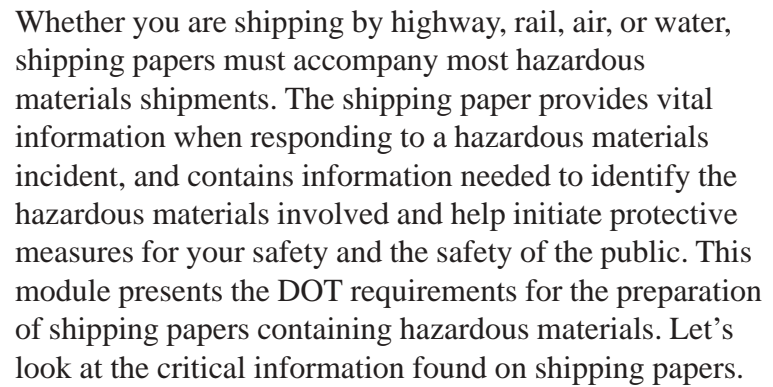
Signed *Andrew Lundberg*

Date *5/25/2005*

SAFETY BEGINS WITH YOU!

MODULE 2

Narrative



2



After completing Module 2 on Shipping Papers, you should be able to:

- Identify the term shipping papers as it relates to hazardous materials or hazardous substances, and describe the information that must be included on them;
- Describe additional information entries needed for DOT Exemptions, limited quantities, hazardous substances, radioactive materials, and empty packagings;
- Describe additional entries required for hazardous material shipments by air, rail, highway, and water.
- Determine when technical names or other special additional entries are required to properly handle and transport hazardous materials;
- Describe the guidelines related to the emergency response telephone number;
- Compare the shipper's certification requirements for domestic, international, and air shipments.
- Identify additional documentation required for hazardous waste shipments;
- Identify record retention requirements for shipping papers relating to hazardous materials.

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As used in the HMR, a shipping paper for hazardous materials transportation is any document that contains the information required to describe the hazardous material being transported. It may include a shipping order, a bill of lading, a hazardous materials manifest, or any other type shipping document serving a similar purpose and containing the required information. Only in the case of hazardous wastes is there a prescribed shipping paper format – the hazardous waste manifest.

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Professor Fed's Knowledge Check 1

Instructions: Select the best answer from the four choices provided. You will have two chances to answer this question correctly.

A shipping paper or shipping document may be presented in any format as long as it contains all required information presented in the correct sequence. Only in the case of a _____ is a specific format required.

- A. radionuclide
- B. hazardous substance
- C. hazardous waste
- D. marine pollutant

Correct answer is C

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The basic rule for shipping papers is that if you transport any quantity of any hazardous material, a properly prepared shipping paper must accompany the shipment. This includes materials identified as hazardous substances, hazardous wastes, and marine pollutants. The basic rules for describing and identifying hazardous materials in transportation are quite simple: Mark the package, label the package, prepare a shipping paper with all the information, including emergency response information, and placard the vehicle. Now let's look at the exceptions to the basic rules regarding shipping papers that cause the most confusion among people handling hazardous materials.

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There are certain shipments of hazardous materials that do not require description as hazardous materials on a shipping paper. Some of the more common exceptions include:

- Hazardous materials with an 'A' in column 1 of the HMT offered or intended for transportation only by highway, rail, or vessel, unless the material is identified as a hazardous substance, a hazardous waste, or a marine pollutant and then it is regulated in all modes of transportation;
- Hazardous materials with 'W' in column 1 of the HMT offered or intended for transportation only by highway, rail, or air, unless the material is identified as a hazardous substance, a hazardous waste, or a marine pollutant and then it is regulated in all modes of transportation;
- Small quantity shipments prepared in accordance with §173.4;
- Certain agricultural shipments prepared and transported in accordance with §173.5.
- Materials of Trade shipments prepared in accordance with §173.6;
- Certain U.S. Department of Energy and U.S. Department of Defense shipments prepared in accordance with §173.7; and
- Shipments of ORM-D, unless transported by air, in accordance with §172.200(b) (3).

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Say you are shipping Dibromodifluoromethane by vessel, with no intention that it will make any leg of its journey by air. Assume that this Dibromodifluoromethane is not waste.

Since it does not appear in Table 1 or Table 2 of Appendix A, it is not a hazardous substance.

Since it does not appear in the List of Marine Pollutants, it is not a marine pollutant.

Finally, since it is identified by the letter “A” in Column 1 of the HMT, and since it is not being offered or intended for transportation by air, it meets the first shipping paper exception: “Shipments with a letter “A” in column 1 of the HMT, if shipped by highway, rail, or vessel only”.

So this shipment of Dibromodifluoromethane, under the circumstances presented, would not require description as a hazardous material on a shipping paper.

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Professor Fed’s Knowledge Check 2

Instructions: Select the best answer from the four choices provided. You will have two chances to answer this question correctly.

Which of the categories of hazardous materials listed here are generally required to have a shipping paper entry prepared for it prior to it being released for highway transportation?

- A. Materials of Trade
- B. Shipments with a letter A in column 1 of the HMT
- C. Shipments with a letter D in column 1 of the HMT
- D. Shipments with a letter W in column 1 of the HMT

Correct answer is C

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When hazardous materials and non-hazardous materials are entered on a shipping paper, the hazardous materials entries must:

- Be entered first, before the non-hazardous material; or
- Be either highlighted or entered in a contrasting color; or
- Be identified with the letter "X" in the column captioned "HM" before the proper shipping name. In the case of a hazardous substance, the letter "X" may be replaced with the letters "RQ" for reportable quantity.
- Even if the hazardous material is entered first or in a contrasting color, you may still place an X or, where appropriate, RQ, in the HM column.

10

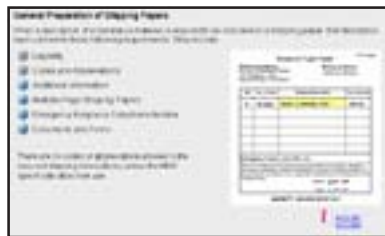


When a description of a hazardous material is required to be included on a shipping paper, that description must conform to these following requirements. They include being legible and printed in English; restrictions on the use of codes and abbreviations; the presence of additional items of information; the need for multiple-page shipping papers; the requirement for an emergency response telephone number; and finally the format for shipping paper documents. Select each of these buttons to learn more about the requirements for preparing shipping papers.

11



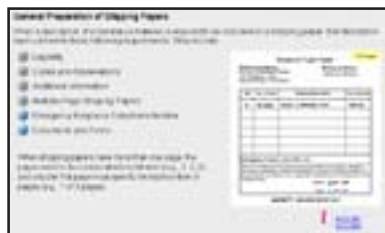
12



13



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16



17



Anyone who offers for transportation a hazardous material that requires a hazardous materials shipping paper, must include an emergency response telephone number for use in the event of an emergency involving the hazardous material. The emergency response telephone number:

- Must be monitored at all times the hazardous material is in transportation;
- The number must be of someone who is knowledgeable about the hazardous material being shipped and has comprehensive emergency response and incident mitigation information, or has immediate access to a person who possesses such knowledge and information. This would include immediate hazards to health, the risks of fire and explosion, the immediate precautions to be taken in the event of an incident, the immediate methods for handling fires, the initial methods for handling spills or leaks in the absence of fire, and preliminary first aid measures; and
- The telephone number must be entered on the shipping paper immediately following the description of the hazardous material or entered once on the shipping paper in a clearly visible location. See §172.604(c) for a list of materials and limited quantity materials that do not require the display of an emergency response telephone number on the shipping paper document.

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Professor Fed's Knowledge Check 3

Instructions: Select the best answer from the four choices provided. You will have two chances to answer this question correctly.

Which of the statements listed below is NOT part of the requirement for placing the emergency response telephone number on the shipping paper?

- A. The emergency response telephone number is entered on the shipping paper immediately following the description of the hazardous material or entered once on the shipping paper in a clearly visible location if the same telephone number applies to every hazardous material.
- B. The emergency response telephone number is entered on the backside of the shipping document in the primary language of the carrier. The emergency number is not required to be that of the activity or agency capable of providing detailed information concerning the hazardous material being shipped, but they must be in contact with someone who can provide that information.
- C. The emergency number must be the number of someone who is knowledgeable about the hazardous material being shipped and has comprehensive emergency response and incident mitigation information, or has immediate access to a person who possesses such knowledge and information.
- D. The emergency response telephone number must be monitored at all times the hazardous material is in transportation, including storage incidental to transportation.

Correct answer is B. The emergency response telephone number is entered on the backside of the shipping document in the primary language of the carrier. The emergency number is not required to be that of the activity or agency capable of providing detailed information concerning the hazardous material being shipped, but they must be in contact with someone who can provide that information.



The shipper must keep a copy of the shipping paper, either electronic or paper, for 2 years after the material is accepted by the initial carrier. The carrier must keep a copy of the shipping paper for 1 year after initial acceptance.

However, both the shipper and the carrier must keep a copy of a Hazardous Waste Manifest (HWM) for 3 years after it is accepted by the initial carrier. In all cases, a copy must be accessible at or available through the principal place of business of the shipper and the carrier, respectively, and must be made available if requested by an authorized Federal, State, or local agency at reasonable times and locations.

The shipping paper must include the date of acceptance by the initial motor carrier. For rail, vessel, or air shipments, the date of the waybill or bill of lading may be used in place of the acceptance date by the initial carrier.

Motor carriers that use a shipping paper without changing it for multiple shipments of one or more hazardous materials having the same shipping name and identification number may retain a single copy of the shipping paper on file, instead of a copy for each shipment made, if the carrier also retains a record of each shipment made, to include shipping name, identification number, quantity transported, and the date of shipment.

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Professor Fed's Knowledge Check 4

Instructions: Click and drag the response to the blank line that correctly answers the question asked. Some responses may be used more than once. You will have two chances to answer this exercise correctly. Select the Done button when you are finished to receive feedback.

1 years 2 years 3 years 375 days 90 days

How long must the person providing a shipping paper for each of these hazardous materials packages keep the shipping documents on file?

_____ 1. 2-liter bottle of Acetone

_____ 2. 2 lbs. of waste arsenic disulfide

_____ 3. 20-oz. of waste diazinon

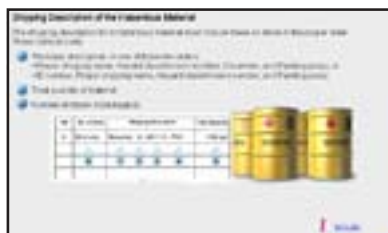
_____ 4. 40-lbs. of Fireworks

_____ 5. 25-lbs. of Phosgene

_____ 6. 6-liter of Pine oil

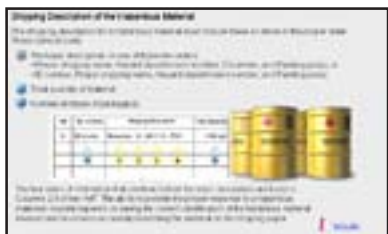
Correct responses are: 1. 2 years, 2. 3 years, 3. 3 years, 4. 2 years, 5. 2 years, and 6. 2 years

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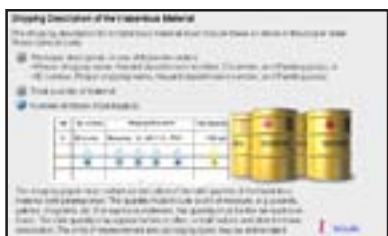
A shipping paper must accurately communicate the hazards of the materials being transported. The shipping description for a hazardous material must include these six items in the proper order. The basic description includes four of these six items and may be presented in one of two sequences. The first sequence includes the proper shipping name, the hazard class or division number, the identification number, and the packing group in that order. The second sequence places the identification number first, followed then by the proper shipping name, the hazard class/division number, and finally the packing group. The next item involves the total quantity of material in the package, and finally the last item involves the number and type of packages being shipped. Click each button to learn more about each of the items of information that form the shipping description.

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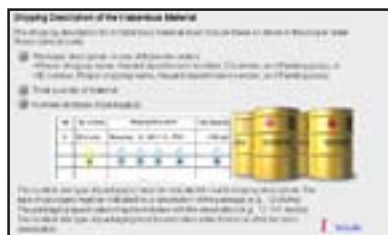
The four items of information that combine to form the basic description are found in Columns 2-5 of the HMT. The regulations allow for certain limited modifications or additions to the proper shipping names. Except for combustible liquids, subsidiary hazard class or division numbers must be entered following the numeric hazard class. Subsidiary hazard class/division risk(s) should be listed in parenthesis as appropriate. The ability to provide the proper response to a hazardous materials incident depends on having the correct identification of the hazardous material involved and this means accurately describing the material on the shipping paper.

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In addition to the basic description, the shipping paper must contain an indication by mass or volume of the total quantity of the hazardous material being transported. The quantity must include a unit of measure, e.g. pounds, gallons, kilograms, etc. For explosive materials, the quantity must be the net explosive mass. The total quantity may appear before or after, or both before and after the basic description. The units of measurement and packaging types may be abbreviated.

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The number and type of package(s) must be indicated for each shipping description. The type of packaging must be indicated by a description of the package (e.g., 12 drums). The packaging specification may be included with the description (e.g., 12 1H1 drums). The number and type of packaging must be indicated either before or after the basic description.

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The basic description is the primary building block for the shipping description displayed on each shipping paper document. You can remember the basic description sequence with the mnemonic S.H.I.P., which represents proper **Shipping** name, **Hazard** class or division number, **I.D.** number, and **Packing** group. An alternate order for the information contained in the basic description may also be used. The alternate method uses the mnemonic I.S.H.P. which represents **I.D.** number, proper **Shipping** name, **Hazard** class or division number, and **Packing** group. Either sequence is acceptable, but the proper order is important. An example of the basic description using the SHIP method for the basic description might look like this: If a subsidiary risk is indicated for the material being described on the shipping paper, the subsidiary risk must be entered on the shipping paper in parenthesis immediately following the hazard class number. This same material using the alternative sequence or **I.S.H.P.** would appear like this:



The shipping description sequence is represented by these six blocks. You have previously seen the blocks S.H.I.P or I.S.H.P. that represent the four items of information that form the basic description. Now we'll introduce the T block for Total quantity of material and the N block for Number and type of package. The four items that form the basic description must line up as either S.H.I.P. or I.S.H.P.. N, the number and type of package can be placed either before or after the basic description. T or the total quantity of material has the same flexibility and can be placed either before or after the basic description or both before and after. As you can probably figure out there are more than a couple sequences that are acceptable. Displayed here are at least eight acceptable formats, each with an example beside it.

These first two examples show the number and type of package before the basic description, with the total quantity of material following the basic description.

These next two examples reverse the number and total quantity so that the total quantity precedes the basic description, with the number and type of package following the basic description.

These next two examples show both the number and type of package and the total quantity of material before the basic description, and the total quantity of material repeated again following the basic description.

These final two examples show the total quantity of material before the basic description, with the number and type of package and the total quantity of material repeated again following the basic description. Each of these sequences represents an acceptable format.

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Professor Fed's Knowledge Check 5

Instructions: Select the best answer from the four choices provided. You will have two chances to answer this question correctly.

Which of the shipping descriptions shown below is NOT presented in the correct sequence?

- A. 1 bottle, Cyclohexyl acetate, 3, UN2243, PGIII, 1 Liter
- B. 1 bottle, UN2243, Cyclohexyl acetate, 3, PGIII, 1 Liter
- C. 1 bottle, Cyclohexylamine, 8 (3), UN2357, PGII, 1 Liter
- D. 1 Liter, PGIII, Cyclohexyl acetate, 3, UN2243, 1 bottle

Correct answer is D. 1 Liter, PGIII, Cyclohexyl acetate, 3, UN2243, 1 bottle

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Professor Fed's Knowledge Check 6

Instructions: Click and drag the response to the blank line that correctly completes the proper sequence for both the normal and alternative order for the basic description. Each response may be used more than once. You will have two chances to complete this exercise correctly. Select the Done button when you are finished to receive feedback.

Proper shipping name	Hazard class or division	ID number
Packing group	Total quantity	

Basic Description

Normal Order	Alternative Order
1. _____	1. _____
2. _____	2. _____
3. _____	3. _____
4. _____	4. _____

Correct responses are: Normal: 1) Proper shipping name, 2) Hazard class or division, 3) ID number, 4) and Packing group; Alternative: 1) ID number, 2) Proper shipping name, 3) Hazard class or division, 4) Packing group.

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Entries in the HMT identified with the letter ‘G’ in column 1 are required to have one or more technical names accompany the proper shipping name on the shipping papers and packaging markings. Technical names must be entered on the shipping paper, in parentheses, either immediately after the proper shipping name, or following the basic description. The HMR allows modifiers, such as ‘contains’ or ‘containing’, and/or the percentage of the technical constituent.

30

Professor Fed’s Knowledge Check 7

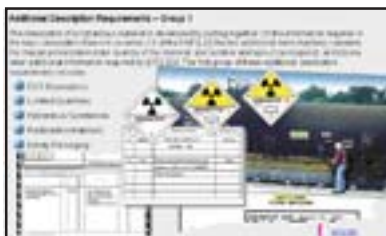
Instructions: Select the best answer from the four choices provided. You will have two chances to answer this question correctly.

Which of the basic descriptions shown below is NOT presented in the correct sequence for a hazardous material containing a ‘G’ in Column 1?

- A. Corrosive liquid, n.o.s. (contains Sulfuric acid / Sodium hydroxide), 8, UN1760, PGII
- B. Corrosive liquid, n.o.s., PGII, UN1760, 8
- C. Corrosive liquid, n.o.s., 8, UN1760, PGII (contains Sulfuric acid / Sodium hydroxide)
- D. UN1760, Corrosive liquid, n.o.s. (contains Sulfuric acid / Sodium hydroxide), 8, PGII

Correct answer is B. Corrosive liquid, n.o.s., PGII, UN1760, 8

31



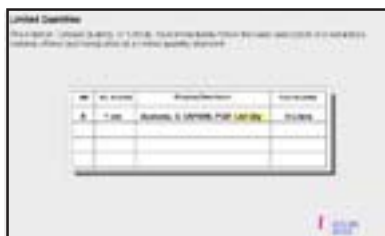
The description of a hazardous material is developed by putting together the information in the basic description , the two additional items that help complete the shipping description , and any other additional information required by §172.203. Additional information about the hazardous material may be placed on a shipping paper, however, the information must not be inconsistent with the required description, and it must be placed after the basic description, unless otherwise permitted. There are 14 additional description items that are described in the HMR. They will be discussed in three groups. The first group of additional description requirements is listed here. Click each button to learn more about each of these additional description requirements.

32



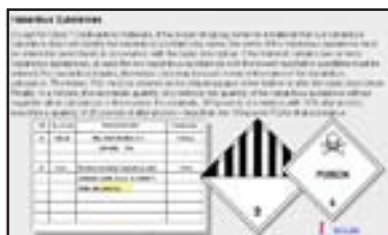
The USDOT has granted exemptions or relief from certain hazardous materials regulations for specific packagings or shipping procedures. If a shipment is made under a DOT Exemption, the shipping paper must include the letters ‘DOT-E’ followed by the assigned exemption number. The exemption number must be placed on the shipping paper so that it is clearly associated with the basic description to which the exemption applies. DOT exemptions are specific. They detail procedures the person holding the exemption, or a person who is party to an exemption, must follow, in order to be exempt from one or more provisions of the HMR – so it is critical that the procedures outlined in the DOT Exemption be followed. Otherwise, the shipment is treated as not exempt from the requirements of the HMR from which the person sought relief. If a package is shipped to you noting a DOT Exemption number on its shipping paper, you may not claim the same exemption when shipping the package with new shipping papers, unless you are named a party to the exemption. If the shipment moves to its final destination without preparation of new shipping papers, however the exemption is still in force.

33



The term limited quantity indicates the maximum amount of a hazardous material for which there is a specific labeling or packaging exception. The notation ‘Limited Quantity’ or ‘Ltd Qty’ must immediately follow the basic description of a hazardous material offered and transported as a limited quantity shipment.

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Some proper shipping names of hazardous substances do not identify the hazardous substance by name. In this case, the name of the hazardous substance component listed in Appendix A to the HMT must be entered in parentheses in association with the basic description. For a hazardous substance shipment, the letters 'RQ' must be entered on the shipping paper. Enter 'RQ' before or after the basic description for each hazardous substance. If the material contains two or more hazardous substances, at least the two hazardous substances with the lowest 'RQ' must be identified. In the graphic example shown, Adipic acid must be in parentheses. For example, 200 pounds of a mixture with 10% allyl alcohol, would be a quantity of 20 pounds of allyl alcohol – less than the 100-pound RQ for that substance.

35



Descriptions for shipping Class 7 (radioactive) materials can be quite involved, due to the precautions taken to safeguard against the unique hazards of radioactive materials.

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The description on the shipping paper for an empty packaging containing the residue of a hazardous material may include the words 'RESIDUE: Last Contained' followed by the basic description of the hazardous material residue. The description on the shipping paper for a tank car that contains only the residue of a hazardous material must include the words 'RESIDUE: Last Contained' followed by the basic description of the hazardous material residue.

Professor Fed's Knowledge Check 8

Instructions: Complete this Knowledge Check by matching the appropriate additional description entry with the type of category it falls under. Select the matching pair by first selecting either the description entry or the category title and then select the other element that goes with that pair. You will have two chances to correctly complete this exercise.

DOT-E	Limited Quantity	Empty Packagings	RESIDUE: last contained must state
Empty Tank Car	Transport Index	Ltd Qty	RESIDUE: last contained may state
Waste Code in Lieu of Name	Exemptions	Hazardous Waste	TI 13

Correct answers: The terms are presented in the correct order below.

Description Entry:

DOT-E
 Ltd Qty
 RESIDUE: last contained (must state)
 RESIDUE: last contained (may state)
 Hazardous Waste
 TI 13

Category Title:

Exemptions
 Limited Quantity
 Empty Tank Car
 Empty Packagings
 Waste Code in Lieu of Name
 Transport Index

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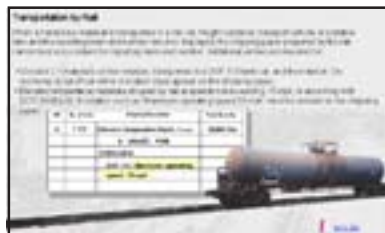
The description of a hazardous material is developed by putting together the information required in the shipping description, plus any additional information required by §172.203. Non-required additional information about the hazardous material may be put on a shipping paper. However, the information must be consistent with the required description, and it must be placed after the basic description, unless otherwise permitted. The second group of these additional description requirements are modal specific and are listed here. Click each button to learn more about each of these additional description requirements.

39



The HMR prohibits or forbids transporting some materials aboard passenger carrying aircraft. The words 'Cargo Aircraft Only' must be entered after the basic description of a hazardous material that is offered for transportation by air, but prohibited from transportation aboard passenger carrying aircraft.

40



When a hazardous material is transported in a rail car, freight container, transport vehicle or portable tank and the reporting mark and number are also displayed, the shipping paper prepared by the rail carrier must also include the reporting mark and number. Additional notations must appear on the shipping paper when a Division 2.1 flammable gas material is being transported in a DOT-113 tank car. These additional notations include: Identify the type of tank car, in this case, DOT-113, and state the prohibition "Do Not Hump or Cut Off Car While in Motion." This prohibition forbids moving the car under its own momentum, called "humping". Uncoupling or cutting the car loose while in motion is also forbidden. For elevated temperature materials shipped according to §173.247(h) (3), the notation such as 'Maximum operating speed 15 mph' must be entered on the shipping paper.

41



When anhydrous ammonia containing 0.2% water or more by weight is transported by highway in either an MC 330 or MC 331 cargo tank, the shipping paper must have the notation: “0.2 PERCENT WATER” to indicate the suitability for shipping anhydrous ammonia in a cargo tank made of quenched and tempered steel. The notation must follow the basic description. When anhydrous ammonia contains less than 0.2% water by weight, the words “NOT FOR Q AND T TANKS” must be entered on the shipping paper, following the basic description.

For grades of noncorrosive liquefied petroleum gas, the word Noncorrosive or Noncor must be indicated on the shipping paper to indicate the suitability for shipment in cargo tanks made of quenched and tempered steel. For grades of LPG other than noncorrosive, the words ‘Not for Q and T Tanks’ must be indicated on the shipping paper.

42



Each shipment by water must have the following additional shipping paper entries. These additional entries must include the name of the shipper and the minimum flash point if it is 61 degrees C or below in association with the basic description.

43

Professor Fed's Knowledge Check 9

Instructions: Click and drag the response to the blank line that correctly completes the statement. Each response may only be used once. You will have two chances to answer this exercise correctly. Select the Done button when you are finished to receive feedback.

prohibited or forbidden	flash point	highway	rail car
0.2 percent or more water	less than 0.2 percent water	corrosive	
non-corrosive	net weight	gross mass	

1. 'Cargo Aircraft Only' must be entered on the shipping paper after the basic description when the material is _____ on passenger carrying aircraft.
2. For a hazardous material transported in a _____, freight container, transport vehicle, or portable tank, the reporting mark and number must be on the shipping paper.
3. When anhydrous ammonia containing _____ is transported by highway in either an MC 330 or an MC 331 cargo tank, the shipping paper must have the notation: '0.2 PERCENT WATER'.
4. In a Specification MC 330 and MC 331 cargo tank, there must be entered the notation 'Not for Q and T Tanks' for grades of LPG other than _____.
5. Shipping papers for water shipments of hazardous materials must identify the minimum _____ if 61°C or below, and the name of the shipper.

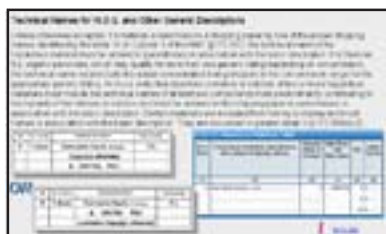
Correct responses are: 1) prohibited or forbidden, 2) rail car, 3) 0.2 percent or more water, 4) non-corrosive, 5) flash point

44



In certain instances, additional entries are required on the shipping paper to help clearly communicate the dangers or special precautions necessary to properly handle and transport hazardous materials in accordance with the HMR. The third group of additional description requirements deals with these specific types of hazardous materials and are listed here. Click on each button to learn more about each of these additional description requirements.

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The letter “G” in Column (1) of the HMT identifies n.o.s. and generic proper shipping names requiring a technical name. If a hazardous material is described on a shipping paper by one of the proper shipping names listed in §172.101 and identified with the letter “G” in Column (1) of the HMT, the technical name must be shown in parentheses in association with the proper shipping name. The word “contains” also may be used with the technical name, if appropriate. Look at the proper shipping name entry for Corrosive liquids, n.o.s. in the HMT. The n.o.s. description does not name the hazardous constituent. In this case, the hazardous constituent is Caprylyl chloride. Caprylyl chloride is not listed by name in the HMT but meets the definition of a corrosive material. Therefore, the technical name, Caprylyl chloride, must be added in parentheses in association with the basic description.

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The regulations regarding the identification of marine pollutants applies only to transportation by vessel and/or transportation of marine pollutants in bulk packagings by air, highway, or rail. If you have a marine pollutant, packaged in non-bulk quantities and being transported by air, rail, or highway, you do not need to identify a hazardous material as a marine pollutant on a shipping paper. If the proper shipping name for a material, which is a marine pollutant, does not identify by name the component that makes the material a marine pollutant, the name of that component must appear in parentheses in association with the basic description.

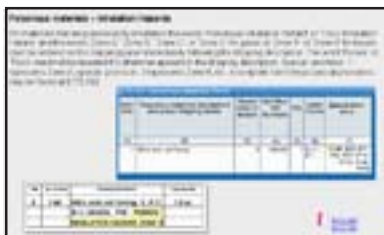
47



Poisonous or toxic materials are subject to additional description requirements in §172.203(m). When the basic description or hazard class of a poisonous or toxic liquid or solid material in Packing Group I or II does not include the word Poison or Toxic, the word Poison or Toxic must be entered in association with the basic description.

Nitric acid, red fuming meets the definition of a Class 8, Division 6.1, PG I, and Division 5.1 material, as indicated by the entries in Column 6 of the HMT. The word Poison must be entered in association with the basic description.

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For a material meeting the poisonous or toxic by inhalation criteria, the words Poisonous-Inhalation Hazard or Toxic-Inhalation Hazard and the appropriate hazard zone shall be entered on the shipping paper immediately following the shipping description. Hazard zones consist of Zone A, Zone B, Zone C, or Zone D for gases, and Zone A or Zone B for liquids. The word 'Poison' or 'Toxic' need not be repeated if it otherwise appears in the shipping description. Nitric acid, red fuming meets the definition of a material that is poisonous by inhalation and assigned to Zone B. It is identified as such by the special provision number "2" in Column 7 of the HMT.

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If a liquid material in a package meets the definition for an elevated temperature material, and the fact that it is an elevated temperature material is not disclosed in the shipping name with the use of the words 'Molten' or 'Elevated temperature' as a part of the proper shipping name; the word 'HOT' must immediately precede the proper shipping name of the material on the shipping paper.

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The additional description requirements on a shipping paper for a Division 4.1, self-reactive material or a Division 5.2, organic peroxide material, must include the following additional information, as appropriate:

- A statement of approval of the classification and conditions of transport when notification or competent authority approval is required.
- The control and emergency temperature for Division 4.1 or 5.2 materials that require temperature control during transport
- The word “SAMPLE” must be included in association with the basic description, for samples of Division 4.1 or 5.2 materials when offered for transportation or transported.

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Professor Fed's Knowledge Check 10

Instructions: Complete this Knowledge check by matching the appropriate additional description entry with the type of category it falls under. Select the matching pair by first selecting either the description entry or the category title and then select the other element that goes with that pair. You will have two chances to correctly complete this exercise.

Marine Pollutants	Elevated Temperature Materials	poisonous by inhalation	Hot
Sample	Marine Pollutant	Organic Peroxides and Self-Reactive Materials	Poisonous Materials
Technical Names for n.o.s. and other Generic Descriptions	Toxic	Poisonous-Inhalation Hazard Zone A	contains

Correct answers: The terms are presented in the correct order below.

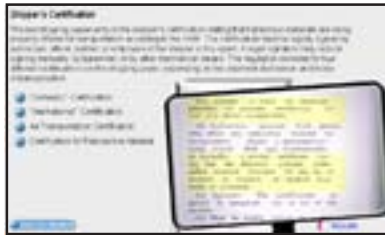
Description Entry:

contains
Marine Pollutant
Toxic
Hot
Sample
poisonous by inhalation

Category Title:

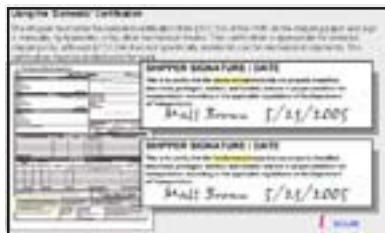
Technical Names for n.o.s. and other Generic Descriptions
Marine Pollutants
Poisonous Materials
Elevated Temperature Materials
Organic Peroxides and Self-Reactive Materials
Poisonous-Inhalation Hazard Zone A

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The last shipping paper entry is the shipper's certification stating that hazardous materials are being properly offered for transportation according to the HMR. It is the duty of the shipper to certify that the hazardous materials being shipped are properly prepared for transportation by printing the appropriate certificate on the shipping paper. The certification must be legibly signed by a principal, officer, partner, or employee of the shipper or his agent. A legal signature may include signing manually, by typewriter, or by other mechanical means. The regulation provides for four different certifications on the shipping paper, depending on the shipment destination and mode of transportation. Click each button to learn more about each of these certificates.

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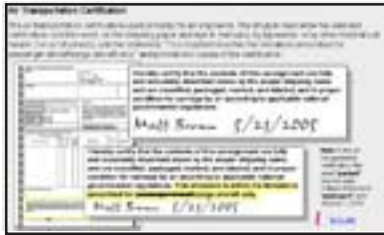
The shipper must enter the selected certification on the shipping paper and sign it, manually, by typewriter, or by other mechanical means. This certification can be used for domestic or international transportation and must be printed word for word. Only one text exception is allowed as presented here.

54



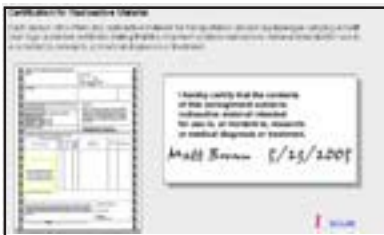
The shipper must enter the selected certification on the shipping paper and sign it, manually, by typewriter, or by other mechanical means. This certification can be used for domestic or international transportation, but must be printed word for word.

55



The air transportation certificate is used primarily for air shipments, but may be used in all modes of transportation. The shipper must enter the selected certification, word for word, on the shipping paper and sign it, manually, by typewriter, or by other mechanical means. For air shipments, the shipper must add the statement, “This shipment is within the limitations prescribed for passenger aircraft/cargo aircraft only;” delete the type of aircraft that does not apply; and provide two copies of the certification.

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Each person who offers any radioactive material for transportation aboard a passenger-carrying aircraft shall sign a printed certificate stating that the shipment contains radioactive material intended for use in, or incident to, research, or medical diagnosis or treatment. The radioactive material certificate is used only in conjunction with air shipments. The shipper must enter the selected certification, word for word, on the shipping paper and sign it, manually, by typewriter, or by other mechanical means.

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Professor Fed's Knowledge Check 11

Instructions: Select the best answer from the four choices provided. You will have two chances to answer this question correctly.

Which of the four certifications discussed can be used with all modes of transportation?

- A. “Domestic” Certification
- B. “International” Certification
- C. Air Transportation Certification with the added air shipment statement
- D. Certification for Radioactive Material

Correct answer is C. Air Transportation Certification with the added air shipment statement

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Professor Fed's Knowledge Check 12

Instructions: Select the best answer from the four choices provided. You will have two chances to answer this question correctly.

For radioactive materials shipped by passenger carrying aircraft, the shipping paper must state that the material is intended for _____ or medical diagnosis or treatment. If you are a carrier, do not accept the radioactive materials for shipment on passenger carrying aircraft unless the shipping paper has a signed certification.

- A. analysis
- B. education
- C. research
- D. All of the above

Correct answer is C. research

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Shipping paper certification is required for all hazardous waste shipments, and if a hazardous material is reshipped or transferred from one carrier to another.

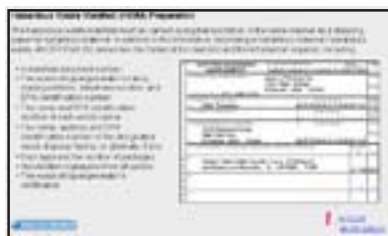
Except for hazardous waste, shipping paper certification is not required for a hazardous material offered for transportation by motor vehicle and transported in a cargo tank supplied by the carrier; by the shipper as a private carrier; or for the return of an empty tank car containing a hazardous material residue.

60



The term manifest or hazardous waste manifest means a shipping paper on which hazardous wastes are described. The hazardous waste manifest must be on EPA Form 8700-22 and 8700-22A (when necessary), and prepared in a manner prescribed in §172.205 and 40 CFR 262.20. It must be dated and hand-signed by the person representing the shipper of the waste and of the initial carrier accepting the waste for transportation. Hazardous waste manifests must accompany the shipment from pickup to destination, and copies must be given to each carrier involved in the movement of the waste and to the designated disposal facility. Some states require the use of a state-designated manifest document. It is recommended that prior to accepting and/or transporting any hazardous wastes, you check with the state agency responsible for regulating those materials.

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The waste shipper / generator must prepare the Hazardous Waste Manifest and provide a copy to each waste carrier and each designated waste facility. The waste shipper, and each waste carrier must retain a copy of the Hazardous Waste Manifest for three years from the date the waste was accepted by the initial carrier. If you are a shipper, be sure the accompanying paperwork is accurate and contains all required information before you offer a shipment of hazardous waste. If you are a carrier, verify the information on the shipping paper. If the paperwork is not correct or the packages are not intact, do not accept the shipment.

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Professor Fed's Knowledge Check 13

Instructions: Select the best answer from the four choices provided. You will have two chances to answer this question correctly.

All hazardous waste shipments must be accompanied by a Uniform Hazardous Waste Manifest. This Hazardous Waste Manifest must be retained by the waste shipper, waste carriers, and waste facility operator for _____ from the date the waste was accepted by the initial carrier.

- A. 90 days
- B. one year
- C. 375 days
- D. three years

Correct answer is D. three years

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This concludes the instruction and Knowledge Checks for Module 2 – Shipping Papers. You should now be able to

- Identify the term shipping papers and describe the information that must be included on them;
- Describe the additional information entries required for special situations;
- Describe the additional entries required for shipments by air, rail, highway, and water;
- Determine when technical names are required in the transport of hazardous materials;
- Describe the guidelines related to the emergency response telephone number;
- Compare the shipper's certification requirements;
- Identify additional documentation required for hazardous waste shipments; and
- Identify record retention requirements for hazardous materials shipping papers.

It is now time to assess how well you understand the information presented in this module. When you are ready, select Test on the Express Lane, to begin the end of module test for Module 2. This will be an open reference test. Good luck.

End of Module Test

Now that you have completed reviewing the topic on Shipping Papers, let's evaluate how well you have mastered this material. This end of module test contains twenty-five multiple-choice questions to determine your mastery of the eight learning objectives covering Shipping Papers. Select the best answer from the four choices provided. This is an open reference book test and you may use any of the references that you have to assist you in successfully completing this test.

Instructions: Select the best answer from the four choices provided.

Question #1

The basic description of a hazardous material on a shipping paper is comprised of four pieces of information presented in which of the following specific sequences:

- A. Hazard class or division, proper shipping name, ID No., and packing group
- B. Proper shipping name, hazard class or division, ID No., and packing group
- C. Proper shipping name, ID No., packing group, and hazard class or division
- D. Total quantity, ID No., PG, hazard class or division, and proper shipping name

Correct answer is B

Question #2

Which is the correct additional entry for a shipment of Anhydrous ammonia containing 0.2% water transported in an MC 331 cargo tank constructed of quenched and tempered (QT) steel?

- A. Corrosive Hazard
- B. Not for Q and T Tanks
- C. Noncorrosive
- D. 0.2 PERCENT WATER

Correct answer is D

Question #3

Each person who offers a hazardous material to an aircraft operator for air transportation by air shall provide _____.

- A. one (1) copy of the required certification
- B. two (2) copies of the required certification
- C. three (3) copies of the required certification
- D. four (4) copies of the required certification

Correct answer is B

Question #4

Liquefied gas, toxic, corrosive, n.o.s., a hazardous material meeting the inhalation toxicity criteria must be identified with the notation _____ immediately following the shipping description.

- A. *Flammable Hazard Zone A, B, C, or D* (as appropriate)
- B. *Poison-Inhalation Hazard*
- C. *Inhalation Hazard Zone A, B, C, or D* (as appropriate)
- D. *Dangerous Hazard Zone A, B, C, or D* (as appropriate)

Correct answer is C

Question #5

The shipper's certification for hazardous materials, other than a hazardous waste, may be signed _____.

- A. manually
- B. with a handwritten signature, only
- C. by typewriter or other mechanical means
- D. A. and C.

Correct answer is D

Question #6

Which of the following is a proper shipping description for a 1 kg. package containing Lithium, a division 4.3 (Dangerous When Wet) material, being transported by aircraft?

- A. 4.3, UN1415, Lithium, PGI, 1 kg, Cargo Aircraft Only
- B. 1 box, Lithium, 4.3, UN1415, PGI, Cargo Aircraft Only, 1 kg.
- C. 1 kg., Lithium mixtures, 4.3, UN1415, PGI, Cargo Aircraft Only
- D. Lithium mixtures, 4.3, UN1415, PGI, Cargo Aircraft Only, 1 kg.

Correct answer is B

Question #7

Since “Flammable liquid, corrosive, n.o.s., 3, UN2924, PGII (contains Methanol, Potassium hydroxide)” is a hazardous material and is a mixture or solution of _____ hazardous materials, the technical names of at least two components most predominately contributing to the hazard(s) of the mixture or solution must be entered on the shipping paper.

- A. two or more
- B. less than two
- C. any number of
- D. no more than three

Correct answer is A

Question #8

No shipper certification is required when the hazardous material, other than a hazardous waste, is being offered for transportation by motor vehicle and transported _____.

- A. in a cargo tank supplied by the carrier
- B. by the shipper as a private carrier, unless re-shipped or transferred to another carrier
- C. both A. and B.
- D. as a limited quantity

Correct answer is C

Question #9

A shipping paper must contain an emergency response telephone number, including the area code or international access code, for use in the event of an emergency involving the hazardous material. The telephone number must be _____.

- A. monitored at all times the hazardous material is in transportation, including storage incidental to transportation
- B. monitored Mon-Fri. 8 AM – 5 PM, EST/EDT
- C. monitored 24-hours/7-days/week
- D. either a FAX number or answering machine number

Correct answer is A

Question #10

Which of the following basic descriptions of hazardous materials is correct?

- A. Corrosive liquids, n.o.s. (contains Octanoyl chloride), 8, UN1760, PGII
- B. Corrosive liquids, n.o.s., 8, UN1760, PGII (contains Octanoyl chloride)
- C. Corrosive liquids, n.o.s., (Octanoyl chloride), 8, UN1760, PGII
- D. All of the above

Correct answer is D

Question #11

For shipments transported by water, in addition to the name of the shipper, which of the following must be added to the shipping paper for shipments by vessel?

- A. the minimum flash point, if the flashpoint is 61 degrees C or below
- B. the words 'Marine Pollutant'
- C. the reportable quantity of radioactive material contain in each package
- D. All of the above

Correct answer is A

Question #12

When a hazardous material and a non-hazardous material are entered on the same shipping paper document, the hazardous material(s) entries must _____.

- A. be entered first, before the non-hazardous material
- B. be highlighted or entered in a contrasting color
- C. be identified by an “X” or “RQ”, as appropriate, in the column captioned HM
- D. any of the above

Correct answer is D

Question #13

For a hazardous waste, the shipping paper copy must be retained for a period of _____ after the material is accepted by the initial carrier.

- A. 90 days
- B. one year
- C. three years
- D. 375 days

Correct answer is C

Question #14

No person may offer, transport, transfer, or deliver a hazardous waste unless a(n) _____ is prepared in accordance with 40 CFR 262.20 and is signed, carried, and given as required of that person.

- A. DOT Form F 5800.1
- B. straight bill of lading
- C. Uniform Hazardous Waste Manifest (EPA Form 8700-22 and 8700-22A [when necessary])
- D. normal shipping paper document

Correct answer is C

Question #15

The shipping paper for each DOT 113 tank car containing a Division 2.1 material or its residue must contain the notation “DOT 113” and the statement _____.

- A. “Maximum operating speed 15 mph.”
- B. “Do not hump or cut off car while in motion.”
- C. “NOT FOR Q and T TANKS”
- D. None of the above

Correct answer is B

Question #16

“I hereby certify that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked, and labeled, and in proper condition for carriage by air according to applicable national governmental regulations.”

The above shown shipper certification may be used _____.

- A. primarily for air transportation, but may be used in all modes of transportation
- B. for domestic transportation only
- C. for international and domestic transportation
- D. for air transportation only

Correct answer is A

Question #17

Which of the following is an appropriate shipping description for a 1 kg. package of Mercury oxide, a Division 6.1, PGII material, being transported by truck?

- A. 6.1, Mercury oxide, UN1641, PGII, Poison, 1 kg.
- B. 1 box, Mercury oxide, 6.1, UN1641, PGII, Poison, 1 kg.
- C. Mercury oxide, 6.1, UN1641, PGII, 1 kg.
- D. None of the above

Correct answer is B

Question #18

In addition to the shipping description required by §172.202, additional information entries would be required on the shipping document for which of the following?

- A. A hazardous material shipment made under a DOT exemption.
- B. A shipment of a Class 7 (radioactive) material.
- C. A. and B. above
- D. Other regulated material (ORM-D)

Correct answer is C

Question #19

All shipping paper entries must be legible and printed _____.

- A. in English, for all types of shipments
- B. in English, for domestic shipments only
- C. in the language of the consignee, for international shipments only
- D. in the language preferred by the shipper

Correct answer is A

Question #20

The emergency response telephone number required to be entered on the shipping paper for hazardous materials must be the number of the person offering the hazardous material for transportation or the number of a(n) _____ capable of and accepting responsibility for, providing the detailed information concerning the hazardous material.

- A. fire department
- B. hazmat manufacturing facility
- C. hazmat team
- D. agency or organization

Correct answer is D

Question #21

Unless excepted by the regulation, the shipping paper prepared by the offeror of a shipment of hazardous materials must contain _____.

- A. the appropriate shipper's certification
- B. the date when the shipment was first offered
- C. the signature or initials of any person accepting the shipment
- D. a USDOT registration number for the hazardous material

Correct answer is A

Question #22

The additional entry "Cargo Aircraft Only" must be entered after the basic description on the shipping paper when a hazardous material _____.

- A. is prohibited from transportation aboard cargo carrying aircraft
- B. is prohibited from transportation aboard passenger carrying aircraft
- C. is prohibited from transportation aboard international-bound aircraft, only
- D. is prohibited from transportation aboard domestic-bound aircraft, only

Correct answer is B

Question #23

A shipper of a hazardous material other than a hazardous waste must retain a copy of the shipping paper for a period of _____ after the material is accepted by the initial carrier.

- A. 90 days
- B. one year
- C. two years
- D. three years

Correct answer is C

Question #24

An emergency response telephone number, entered on the shipping paper in a clearly visible location, is required for which of these hazardous materials when being transported by highway?

- A. Carbon dioxide, solid
- B. Consumer commodity
- C. Limited quantity materials (§172.203(b))
- D. Substances, explosive, n.o.s.

Correct answer is D

Question #25

When entering a hazardous material on a shipping paper or hazardous waste manifest, each hazardous material entry can be distinguished from a non-hazardous material entry by the use of the letter 'X' or the letters _____ in the column captioned "HM" before the proper shipping name.

- A. AW
- B. NA
- C. PP
- D. RQ

Correct answer is D